REMARKS

Claims 1 and 6 are currently pending in the application; with claim 1 being independent. Claim 1 was pending prior to the Office Action, and claim 6 has been added.

The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein. Applicant respectfully requests favorable consideration thereof in light of the amendments and comments contained herein, and earnestly seeks timely allowance of the pending claims.

Claim Rejections – 35 USC § 103

The Examiner rejected claim 1 under 35 U.S.C. § 103(a) as being unpatentable over US 6,040,612 ("Minami et al.") in view of US 7,138,695 ("Kim et al.").

Applicant traverses this rejection.

Applicant has amended independent claim 1 to recite "an imaging portion in which a cover glass is adhered to an imaging surface side of a solid-state image pickup device as if sandwiching leads, a slight first air gap is formed between the cover glass and the imaging surface of the solid-state image pickup device and a circumference of the cover glass is larger than the solid-state image pickup device, and a circuit board having an accommodation concave portion for accommodating the solid-state image pickup device so as to connect the leads to terminals on an upper edge of the accommodation concave portion, wherein the concave portion forms a second air gap between a first adhesion area and a second adhesion area, and the second air gap is formed between the solid-state image pickup device and the circuit board in the concave portion, and the first air gap and the second air gap are airtight spaces respectively, the first adhesion area being between the solid state image sensor and the cover glass, and the second adhesion area being between the cover glass and the circuit board, wherein the first adhesion area and the second adhesion area are on a same side of the cover glass, and wherein said cover glass is formed in a size for blocking an entrance of said accommodation concave portion."

The amendment to claim 1 is supported by at least Figs. 2-3 and paragraphs [0026]-[0028] and [0036]-[0038] in the US publication 20040188816 of the present application.

To establish a *prima facie* case of obviousness, the Examiner has the burden of meeting

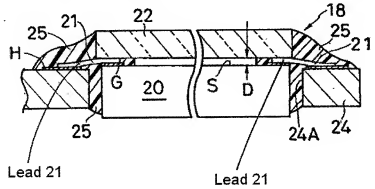
the basic criterion that the prior art must teach or suggest all of the claim limitations.

Regarding this basic criterion, the Applicant submits that Minami et al. and Kim et al. do not disclose or suggest, at least, a slight first air gap formed between the cover glass and the imaging surface of the solid-state image pickup device and a circumference of the cover glass is larger than the solid-state image pickup device, and a circuit board having an accommodation concave portion for accommodating the solid-state image pickup device, wherein the concave portion forms a second air gap between a first adhesion area and a second adhesion area, and the second air gap is formed between the solid-state image pickup device and the circuit board in the concave portion, and the first air gap and the second air gap are airtight spaces respectively, as recited in claim 1.

In the Office Action, the Examiner alleged that a clearance between a first adhesion area and a second adhesion area is a space between through holes 25 and 24A in Minami et al.

Claim 1, however, recites two air gaps. One air gap is formed between the cover glass and the imaging surface of the solid-state image pickup device. The second air gap is formed in the concave portion, between the solid-state image pickup device and the circuit board. Furthermore, the first air gap and the second air gap are airtight spaces.

Minami et al. discloses only one air space, which is the air gap D in Fig. 1D (reproduced below for Examiner's convenience).



In FIG. 1D of Minami et al. there is no airtight air space formed between the solid-state image device 20 and the circuit board 24. In fact, the adhesive 25 is filled between circuit board 24 and the solid-state image device 20. A conductor lead 21 is located between one adhesion area (the adhesion area between the sensor 20 and the cover glass 22 at pad G) and another

adhesion area (the adhesion area between the pad H, on the circuit board 24, and the cover glass 22) (col. 4 lines 10-22). The adhesive 25 is filled in the other areas in which leads 21 are not provided (col. 4 lines 45-50). Therefore, an airtight air space formed between the solid-state image device 20 and the circuit board 24 does not exist in Minami et al. The only air gap in Minami et al. is the air gap D between the cover glass 22 and the surface of the CCD 20. All other spaces in Fig. 1D of Minami et al. are filled with solid elements, for example with adhesive 25 and conductor leads 21.

Kim et al. does not show a first air gap formed between the cover glass and the imaging surface of the solid-state image pickup device, and a concave portion which forms a second air gap between a first adhesion area and a second adhesion area, and the second air gap is formed between a solid-state image pickup device and a circuit board in the concave portion, and the first air gap and the second air gap are airtight spaces respectively, as claim 1 recites. In Fig. 4 of Kim, for example, there is no airtight air gap between a solid-state image pickup device and a circuit board in the concave portion. Epoxy 19 fills the sensor areas in Fig. 4.

Thus, none of the references discloses or suggests a second airtight air gap formed between a solid-state image pickup device and a circuit board in a concave portion.

Advantages of the imaging apparatus recited in claim 1 are that the second air gap becomes a buffer space for moisture and also functions as a heat blocking layer for the first air gap, as explained at paragraphs [0027]-[0028] in the US publication 20040188816 of the present application. Specifically, the second air gap reduces condensation and seepage of moisture into the first air gap. Also, when heat is generated from a circuit members mounted on the back side of the circuit board during operation, or when heat enters the device from the outside, the second air gap reduces the temperature change due to heat on the first air gap. This further prevents condensation on the back side of the cover glass and prevents degradation of the adhesion areas. Minami et al. and Kim are not prior art to the claimed invention, because Minami et al. and Kim cannot achieve the advantages of the claimed invention. That is because Minami et al. and Kim do not disclose structure to achieve these advantages.

Hence, Minami et al. and Kim et al. fail to teach or suggest all of the elements for claim 1.

For all of the above reasons, taken alone or in combination, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection.

New Claims

New claim 6 is added through this Reply. No new matter is added. The new claim is allowable for at least due to its dependency from independent claim 1. Applicant respectfully requests that the new claim be allowed.

Conclusion

In view of the above amendments and remarks, this application appears to be in condition for allowance and the Examiner is, therefore, requested to reexamine the application and pass the claims to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Corina E. Tanasa, Registration No. 64,042, at telephone number (703) 208-4003, located in the Washington, DC area, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: September 17, 2009

Respectfully submitted,

By _____
D. Richard Anderson
Registration No.: 40,439
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

DRA/CET